Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of	)	
	)	
Commission Seeks Comment on	)	ET Docket No. 02-135
Spectrum Policy Task Force Report	)	

COMMENTS OF TELESAT CANADA

Telesat Canada ("Telesat" or "the Company") hereby submits the following comments to the Federal Communications Commission ("FCC" or "the Commission") in response to the corrected Public Notice of November 25, 2002, calling for comment on the Commission's Spectrum Policy Task Force Report ("the Task Force Report") released earlier in November.[1]

As the Company explained in its initial comments provided to the Spectrum Policy Task Force,[2] Telesat is a Canadian-licensed satellite operator, and is keenly interested in this proceeding as any resulting policy determinations could have a direct bearing on Telesat's present and future satellite operations across all of North America. In this regard, Telesat notes that it now has four Fixed Satellite Service ("FSS") satellites, Anik E1, E2, F1 and F2, on the FCC's Permitted Space Station List, along with Commission approval to offer two-way broadband services at Ka-band in the U.S. using the Anik F2 satellite.[3] In addition, Telesat currently owns and operates the Nimiq satellite in the Broadcasting-Satellite Service band ("BSS"), which is used by a customer to provide Direct-to-Home and other services in Canada (similar to the DBS satellites licensed by the FCC), and recently launched a second BSS satellite, Nimiq 2, which will go into

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[1] Spectrum Policy Task Force Report, ET Docket No. 02-135, November 2002,

[2] Comments of Telesat Canada re *Spectrum Task Force Seeks Comment on Issues Related to Commission's Spectrum Policies*, ET Docket No. 02-135, 8 July 2002.

[3] *Request to Eliminate Conditions on E1 and E2's Inclusion on the Permitted Space Station List*, DA 01-2051 16 FCC Rcd 15979 (International Bureau, 2001) (Order); *Anik F1 Permitted Space Station List Order*, DA 00-2835, (International Bureau, 2000); and *Anik F2 Permitted Space Station List and Ka-band Order*, DA 02-3490, (International Bureau, 2002).

commercial service in the next few months. With Canada and the United States sharing a common border and licensing satellites in close proximity across the North American arc, Telesat is also heavily involved in international spectrum coordination discussions, either directly with its U.S. counterparts or in supporting the Canadian Administration in its negotiations with the U.S. Administration. Given this involvement and Telesat's presence in the U.S. satellite marketplace, any Commission action taken on the findings and recommendations of the Task Force could have a significant direct bearing on Telesat's satellite operations.

While the Task Force Report is wide-ranging, Telesat is limiting its comments to two specific matters which could have implications for geostationary satellite facility operators. The first of these comments relates to licensing procedures and the need for flexibility while safeguarding public safety and ensuring that there is no unacceptable interference caused to other operators or service providers, while the second relates to the adoption of quantitative standards for interference level protection.

Routine Licensing Procedures

A common theme and major recommendation of the Task Force Report is that spectrum policy must evolve towards more flexible and market-oriented regulatory models. A number of objectives that would allow such flexibility in the future were outlined under "V. Key Elements in a New Spectrum Policy" beginning at page 15 of the Report. In this vein, Telesat believes that spectrum policy needs to accommodate both existing and new service offerings that make increasing use of equipment having a standard design. Flexible policy is vital to the economic success of new services that can take advantage of the economies of scale that come with common equipment that meets the requirements of a technical standard. A policy that permits the licensing of new terminal equipment based on certification that a license has previously been issued for such equipment of the same type, allows new services to be rapidly deployed and contributes to the economic success of those services. More specifically, such flexibility would reduce the administrative burden of regulatory compliance imposed on operators and service providers by reducing overhead costs and the time delays associated with gaining additional

regulatory approvals. It would thus permit operators and service providers to concentrate on offering more cost-effective services in a more timely manner.

In the same way that a licensee now certifies compliance in a routine license submission with certain regulatory requirements, a more flexible policy that would allow operators and service providers to be self-governing would also reduce the administrative burden for both the license applicant and the regulatory body. Given a set of guidelines and procedures that can be combined with available monitoring technologies, it is feasible for operators and service providers to confirm to the Commission that all applicable regulations, including radiation hazard rules, have been met by all of the end users in their respective networks.

To this end, Telesat believes that an industry working group should be established to study and provide recommendations to the Commission on possible self-governing guidelines and procedures, designed to minimize constraints and administrative requirements while safeguarding public safety and ensuring that any interference caused to other service providers would be kept within prescribed limits. This working group should be open to all interested parties authorized to provide FSS services in the United States.

Adoption of Quantitative Standards

The Task Force recommends, at page 27 of its Report, that the Commission adopt a more quantitative approach to interference management based on the concept of "interference temperature". However, interference noise temperature is not the only way of measuring, characterizing or establishing interference limits for the interference environment. In some types of services or between some types of services, the interference temperature approach may work, but in other cases it may not be as appropriate or meaningful.

For example, in a two degree satellite spacing environment, satellite networks have grown and thrived in an "interference limited" environment where the single entry $\Delta T/T$ trigger coordination criteria in the ITU-R is routinely exceeded. As another example, in the case of interference between the FSS and the Fixed Service, a six percent increase in the noise-floor of

the terrestrial system that has a high rain fade margin amounts to a negligible decrease in that system's performance, as measured by its increase in unavailability. In fact, in frequency bands where rain fade is the predominant fade mechanism, ITU-R studies, in Study Group 9, have demonstrated that high levels of interference into a small percentage of Fixed Service links which intersect the GSO arc have little or no effect on the performance of the link, provided the increase in the noise-floor due to the interference is less than the fade margin on the link. Given that the rain fade on the (longer) path to the satellite is almost always greater than the fade on the terrestrial path, the interference in that case is faded at least as much as the wanted carrier of the terrestrial system. As a consequence, it is too simplistic to assess the interference impact on a terrestrial service based solely on the interference protection provided by an increase in noise floor. Impact on availability is a much more meaningful measure of the impact of interference in some cases.

Determining interference impact on an availability basis is considerably more complex and requires sophisticated models to predict rather than measure. Emphasis should be given to modeling interference impact by computer simulation (using internationally accepted methodologies developed by the ITU-R, such as that described in Recommendation SF.1572-0) as opposed to the actual measurement of interference. For example, taking measurements over a large geographic area where the interference can vary over a wide dynamic range over time is clearly not practical. Nor could such measurements accurately characterize the expected levels of interference, because only a discrete number of points can actually be measured. Simulations are a more cost-effective alternative.

Telesat trusts that these comments will prove useful to the Commission in identifying and implementing possible spectrum policy changes which will result in increased public benefits and/or in reduced costs of managing valuable spectrum resources.

Respectfully submitted,
TELESAT CANADA

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January 27, 2003